

## ABSTRACT

Providing a controllable impedance at a reference plane in a circuit

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Apparatus for providing a controllable impedance at a reference plane in a circuit  
5 comprises a unidirectional transmission line loop having first and second input/output terminals. The first input/output terminal is connected to the reference plane and an amplifier is located in the transmission line loop to amplify signals passing in a direction from the second input/output terminal to the first input/output terminal. A variable tuned circuit couples the second input/output terminal to a terminating device.